

REPLACEMENT SHEET SUBMITTED ON SEPTEMBER 4, 2009

Figure 3. Annotated sequence of the paralogous cluster

	1	10	20	30	40	50	60	70	80
1	caatggagac	agcatatgag	tgagctctac	agggccgat	gagcttagct	ggtagtcccc	ctggcgggtg	ccgacgcgcg	80
				← stop sensor kinase					
81	ggagcgtccc	gggtcagatg	ggcgaatcga	ggcgtctgac	tcacagcttg	ctctgctagt	ggagggcagt	gtcacagcga	160
161	ttgtgtctcc	cgccgcgggc	gggtctgaca	ggcgaatttg	ggcgcagagt	gactccaccc	ggctcgtgag	ggcgcagagg	240
241	cccaagcccc	ggcagggggc	ggcgcacacg	ggcgcgtcgt	cgcggaatgc	gactggagag	cgtcgtcccc	gggtggccac	320
321	atygagctgg	acagcgttgg	caacgaattg	cttggagggc	ttgtctagga	cctcggagac	ggctagtac	ggcgtgttct	400
401	cgaacggatc	gggttagtgt	ttcccggtct	ggatctcag	cggacacggg	atggcgagac	ggcgggcccag	ggccttgagc	480
481	ggcggcagga	gtccgccttc	ggcagatacc	ggcagatgga	tgcccagggc	gaactccggg	agttctcgca	cggcgaggcg	560
561	cagcccgctg	gtcaacttgt	cgaactgcgc	gatacgtctg	tcgggtctgca	ggggcacaga	caattgcacg	gtcgcacccc	640
641	ggagcgcag	ggagacacgg	cgtcttgggg	ggccgtctgg	caagtcctgt	tcgatacggc	ggcgggcggt	gtcggcggcg	720
721	ggagcagatcc	gggccccttga	gcgtttgagg	ggcgccttgc	tctcctpgtt	ggcgtatggg	gtggccacca	gttctgtgaa	800
801	ggcgcgcagc	cgttctctgg	ttgcctagcg	catcgcttgg	tcgttatccg	acgcacacgt	ggagcggccc	caaatgtgtc	880
881	cgtcgacagtt	gatcggcttg	caacacgttg	cgcgggaatcc	caactctctg	cgcagcagcg	aggcggggcc	cggagcacag	960
961	ggcctatgt	cgtcatatcg	cgcctggcag	ccgcaactcga	acacacgggt	gtgcacattc	cggccgcctg	gcgttaacctg	1040
1041	gatacagcga	gaaataatcc	ggcctgtcct	gtttccagcgg	ggagacataca	ggcgggttcc	gttggagctcg	tcaacgcaga	1120
1121	ggacccagaa	gtccgcagag	aggagctgtc	ggcctcgggc	ggcgacccgg	ggcaacact	ctttcggcgg	tgccgcctccg	1200
1201	ggagacaggg	tcgcaacggg	cgcagcgcgc	gcgtgtctct	cggcggccccc	cgcagactcc	acaagtgcct	gggtgttcgc	1280

Figure 3a/3

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Figure 3 Continued

1241 gatggcgggtg gacacgaagt cagtgaaacc ggcacgcggy tctctgggtgt cgggcggcag cgtttccgcy gtcacgcaga 1360  
1361 tgcgcattcat caccacccac agcgttccct gtagcttgat cggcagcgcy acgacggaac cgaagccgcg cgcctctggcg 1440  
1441 aatgtcggggg gtcgcccggga cgaactcgccg gccttggtgga tccggggccgg ccgcccgcctc tgggaacaca gccctacacac 1520  
1521 gtttcggcgcg tccgggttcca cccgggtgcc gatggggag agcgggcccgt gcaagcttttc gacacagcgg ccgacggccgc 1600  
1601 tggccatggcc gtccggatgg agcctgataa ttccgggtcac atctgttccg agcagttctc cgaacttcgc gcgcaccgtc 1680  
1681 gggaacattt gttccggttg ggtggccctg gccacacagg tggccacccg tgggagtggc gcccgctcct gacacatctg 1760  
1761 ttccgagcac agcacggctg ccaggc **cccc ca** acccgccc gatagcccc gcataccgg tatcacggca catcacatg 1840  
1841 agtgcggcg tgaagcccg taaagtggc ccgcggaggt cggglaagag cgttcggagt cagcccccgg acggcgggga 1920  
1921 cggctcttctt cgttcggcg ccggggcactg ccgcggcgccg gaattccgcc tgaacttcgg agtttcgac tgaactggat 2000  
2001 cagcgggttcg gtttggtgg aaggatggt ggtcgctggc ggcatggcg aagccgatcg ttcccatgac ttctgggaag 2080  
2081 tgcctcgcgg aaagtgcgtc cgtttcccg aatggccgc gaacagcctg cgggtttctcc acgggggaga gatcccgaa 2160  
2161 cgggcggagg agctgcggct tggagcgtct tcccatcga gaagatgttg cccggtgttc ggaacccgc gcacacgtcc 2240  
2241 ccaacggcgt cgtgtatcag ccgcttcggc ccggttcagc **acggcagaa ca** cggatgac gacgttacc **start of csm/par** 2320  
2321 tgaagttggt cagcagcttc ccggcctgcc gggctggctca cgtgtcatca ctgcttggc ctgcttggcc gfnagggccg 2400  
2401 agggcgga actggagtc ggccttcgg ctaacggcg cagttgggtg cgttttggcc ctgctgtcca tcacggcg cagttgggtg 2480  
2481 cgggtcgact cagctgctt cgtatctg ggaactcac caccggggcg ggtcaccccg acgtccaggt cctatgtgtc 2560

Figure 3b/3

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Figure 3 Continued

2561 cggcgctggg aaactcttag ccgagctggt gctcccgagac ggttcgagac ccgacactgt gacccagccg ccgggtatca 2640  
2641 ccttcgctgt ccgacccgag cacatcgagc ggaacgcttt tgagccagac atccagagac ggcgcggctt ctgcgcgag 2720  
2721 gaggagacac agtagggcgg ggcctgtctc tgcagggccc tgcctgagtc ggcctgtgga cctgaggg agctgagcgc 2800  
2801 gtacgaattc ggcctcgagc aggcacatcg gctggaagag ctccggtctg ggcctgtgga gacatggcgt cactgtctgc 2880  
2881 tgcgccttggg ggggagccag gaagtgatgg adcaacttcaa gccgagatgg cagccgaatc cctgtccgga gccgctgattc 2960  
2961 ggccacatca tgcagcccca gtaccggctg ggtgtccacg ccgacacgctt cagcagctac gaggccacgc gccggccctt 3040  
3041 ggcctagagag ctggggacag atccgggcaa ggaagtgcgc gcgctgcacg ccgcgattct cctcaggg accgctctgc 3120  
3121 accgcctctt cccggcgttc gcgcgcgcctt gggcgggggt tccggcgagc gccctgacgg ttgtcgtccc gccacagcgg 3200  
3201 tcgagggcctt tgacgcggcc ggtggcgggg gccggcgcgag tccggggggc gatgacggtg gcggcgggcg gccggggcgcc 3280  
3281 cccgcgcgttc gcttccgggt cctgttcgac gttccgtttcc gcttccgggtt cggcttcggg ctccgtctct gcctcggttc 3360  
3361 ccaactcttt tccggggttc gtttctggctt gggcgctcgt tgcgcgcttc gtacgcggcg cgttttcggg caatgtcttc 3440  
3441 ggscctcggtt cggctttcgg gtcgctggcg ctccacccgc cglagacctt ccggggcgag cgggttcacg ggsgcgcgca 3520  
3521 gggaatgcgc accgggcagc ttgtcccccac gcttccggcg cgttcggcg gctgcgggtt ctgcgggtt 3600  
3601 ccggagctc cgcctcac actccgggc ggttggcgtt cgttcggcg gaggcgga ggggaaag ccggtctctc 3680  
3681 tccgattgg agcactcgtt tccgacagt gtgacacag tctgggtctc clgttcggag agtgaggacc ggcgcagcta 3760  
3761 ctggcgctgg agacgtcgc tggcgatctt gtatcgatg tggcgagac gtatcgagc attcccggtt tggcgcggc 3840  
3841 ggcactcgc ggaactggtt ccgaggttg gcccgagcc acagggggcg cactccccc acggggggga ggagaaagc 3920

Figure 3c/3

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Figure 3 Continued

3921 gacacacagg aagctcagag cgaacagggac agaacacacag cagcacaacat cagctctcag cagcctctcag cgcacacagc 4000  
4001 ctccacagag gctcgattca cactgacaga cgcctgtgtc caggcctctc tgcacacagt ccgaggaaccc gctgtgatca 4080  
4081 tgcctgagga catgagagag gacgaagccc actcctctgc actgtctgag ctctgtgttg agcaactgag caccgtcccc 4160  
4161 ctgtctgtcg tgtcacac gacacactt cgtctcagtc acgaagcaga gctcgaagg gcgcagccg tgaatctcca 4240  
4241 gtcacagacc gacagccagg tctgtctgaa agcctctgac gacagggcca cggggaact cgcaggagg atcttgaggca 4320  
4321 aggcacacaga caccctcttc gtacgggccc tgaacagagc ctccagcagg aaccctact tctctctca gctctccagg 4400  
4401 tgcctcagc agggctctgc cgcgcctggt gaaacggaga tcccgagaca gctgagcagg gtcgtgtcgc aacggtctgc 4480  
4481 gagcgttcag ccgcctcag gccggtgtt gacactctgc ggggtctgag agccagttg cgaacggcgt gctgacagga 4560  
4561 ccgtgtctag caatgaggga atccgcttg aagactctg tacggcgttc cgcggcgtc tcttgaggga agaccccagc 4640  
4641 gaccacagac gctcaggtt cgtgatacc ctgttcaggg aggcctcttg ggaagacctg gagaacaccc gtcggccagt 4720  
4721 gtcacatttc tccgagctag ggggtctgtg caagttctca stop complete  
4801 GCGTCCCG AGCGCGGCTT TGTATCCCG GGGCAGCGGG AGCGGACCC GGGTGCAGG GCGGTGCCG ACACGTGGCG 4880  
4881 GAGAGCCCC CATTTGACAC GTACGCAGCG GATACGTACC 4960  
4961 CCGCGTCCCG CACCAACCC GAGCGCGGTC CGACGACAC TCCCAACCG CGTCCCGGA CTGTCCCGG CACCGTTCC 5040  
5041 GAGCGCGGCG CGACGCGGCG CGCGAGGCC CGTGTGCTGC TCGTCCGA stop complete  
5121 CGGGGCGCG GAGAACCGA CGGTTCTGGT CTCGGCGCG GGTGTACCG TACGGGACG CGAGGGCGG ACCTACTCG 5200

Figure 3d/3

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Figure 3 Continued

5201 AGGCTCTGTC GTGCTCGAG CTGACCCAGA TCGGCATGAG ACGTGAAGAG ATCCGCGAGG CGGCGCGCGA GCAGATGCGG 5240  
5281 ACATCTGCTC ACTTCCAGAC CTGCGGCACC ATCAGCAGAG ACGAGGCGAT CGGACTGGGC GCGGCCTCA CGGACTGGGC 5360  
5361 GCGGAGGGGT CTCCAGCGCG TCTACTTCAC CAGCGCGCGG GCGGAGGGCG TCGAGATGCG CTGTGCGATG GCGCGTTACT 5440  
5441 TCCACACCG CAGCGCGAGC CGGAGCGCA CTGCGATCTT GTGCGCGCGC ACCGCTACC AGCGATCGG CTACGCGAGC 5520  
5521 GGTACAGTAT CGGCTCGCG CGCTATACAG GACGGGTTCG GCGCGTGT GTCCCATGTG CACACACTCA GCGCGCGCGA 5600  
5601 CCGTACAGC GCGGACGTAT ACAGCGCGA GAGCTTCAGG GAGTACTGCG TGCGCGACT CGCGCGACG ATCGAGCAGA 5680  
5681 TGCGGCGCGG GCGGATCGCG GCGATGATCG GCGGCGCGGT CATGCGCGCG GCGCGCGCG TCGTCCGCGC GCGCGACTAC 5760  
5761 TGCGCGCGCG TGCGCGCGT GTCGCGTCC CAGGCGATCC TCGTATCTT GAGCGAGTTC GTACGCGGT TCGCGCGCAC 5840  
5841 GGGGACGTGG TCGCGCGCG AGCACTTCGG GGTGACCGCC GATCTGCTGG TGACCGCGAA GGGCATCAC TCGGGGTATG 5920  
5921 TCGCGGACGG GCGGTGCTC CTGACCGAGG AGTTCGCGGA CCGGTGAC GGGGAGCGG GTTCCCGAT CGGCTTCACC 6000  
6001 TATACCGGTC ACCCGACGCG GTGCGCGCTC GCGCTGCGCA ATCTCGCAT CATCGAACGG GAGGGCTGC TCGAGAGCGC 6080  
6081 GGTGAAGTGG GCGGACACAC TCGCGCGCGG GCTGGCGCGC CTGCGGGGCG TGCGCGCGGT GGGGAGCTC GGGGACTGG 6160  
6161 GCATGATGCT CCGGTGCGAG CTGGTGTGCG ACAGACGCG CCGGACCGCG CTGCGCGCG GCACTTCGG GGTGTGGAC 6240  
6241 GCGCTCGCG AGGACCGCG GTCATCTGC GGGGCGAGC GCGCTCGT CCGGCGCTCG TGATGAGCG 6320

Figure 3e/3

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Figure 3 Continued

6321 GGCACAGCGG GAGCAGAGTGG CAGACGGGTG GAGCTCGGTG CTGCGCGCGC TGGCAGCCGA GCGCGGATC GCGCGCGCGC 6400  
6401 CCGCGCGGG GTACAGAGC CAGCGGCGC CACCGCGCGG GCGCGCGCGG TCGCGAGAGC GCGCGAGCG GCGCTTCCG 6480  
6481 CGTTTCGCG GCGCTTTTC GTGCGCGCGC GCGCTTCCG TGGCGGCTTC CCGTGGCGCG CCGTGGCGCG TCGCTCCGCG 6560  
6561 GCGTGGCGC CGTTCGCGT CAGCGCGCT GTGAGCGCG CCGCAGCGC CCGTGGCGC GTTGGAGAC CGCGCGCGGA 6640  
6641 CCGCGCGCGC GAGCGCGCGC AGCGCGCGC CGGATCGGT CGGATCGGT CGGATCGGT CGGATCGGT CGGATCGGT 6720  
6721 AGGTCAGCG CCGGATCGC GCGTCCGAG CCGGATCGC CGGATCGC CGGATCGC CGGATCGC CGGATCGC CGGATCGC 6800  
6801 TTACCGCGT CCGGATCGC CCGGATCGC CGGATCGC CGGATCGC CGGATCGC CGGATCGC CGGATCGC CGGATCGC 6880  
6881 GCGTGGCGC GCGGATCGC AGCGCGCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 6960  
6961 GCGTGGCGC GCGGATCGC AGCGCGCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7040  
7041 CCGGATCGC TCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7120  
7121 GCGGATCGC CCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7200  
7201 GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7280  
7281 TTGCGCGCGC TCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7360  
7361 CCGGATCGC CCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7440  
7441 AGTGGCGCGC GCGGATCGC TCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC GCGGATCGC 7520

Figure 3f/3

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Figure 3 Continued

7521 CGGCTGGGTC GGGGGGTGGT CAGACGGGCG TGCTTGAGGG CGGGGTGACA CGGACGGGCA CGGACTGGG GGCCTGTGGC 7600  
7601 CCGCTGTGGG GGTGGACAG GGGACGAGG CCGCGGCGGG TCCTCCGGGC GGATCAGCAT CCGGTCGGC GGCCTGGAGG 7680  
7681 TCCTTCCTCG CCGCGCGGAC CGGGGCGCGC CGGACGGCGT CACCGGTTAT CCGCAGGGCG GCGAGGTGAC GGTCCATATC 7760  
7761 GACCTCGGTG TCCTGGGGCG GGGGGCGGGC GGGTTGAGGG TCACAGGGTG CAGCTCTCTG GCGGGGTACC GGGGGTTCGG 7840  
7841 CCGCGGGCGG GCGGTCTGGA CCGGGGCTCC GGGGGCGAG GCGACGGGCA GGGGGGGGGA GCGCAGCGGA GCGCAGCGAA CAGCGGAGCG 7920  
7921 GGGCTGGTGG TCATTCGGC ACCGGGGCGG CTCCGTTGGT TCCTTCCTGT GTCCCGGGCC GCGCTACCCC CAGCGGTGCC 8000  
8001 CCGGGGAGTC CAGGGGGGTC TGCGGCTGCA CGGCGTCCAC CGCGTTCTCG GCGTTCTGG CGTGTCTGGC GCGCGGCCCC 8080  
8081 GGTGGAGGG GAGAGTCCAC CGGTGCGGAC GCGGGCGAGC TGGTGGCGCG GCGGTACTGG TAGACAGTT CGGGCCCGAT 8160  
8161 CTCCGCGCGC AGCAGGGAG GATTCCTCCGA CGGTTCTGAC GCGGGGACA CTTCGACAC CTCGAGCGG AGGGGCTTGA 8240  
8241 GTTGGCGGAC CAGTGGAGC AGGGTCACTA CTTCGGGGA GGCACCGCG CCGGGGGCGG GTGTGCCGTT GCGCGGGGCG 8320  
8321 TACCGCGGTT CAGAGGACTC GATGTGAGC GAGACGTACA GCGGAGGCG CCGCAGGTTG CCGCGGATCT GCTCGCGCAT 8400  
8401 GCGCGCGGTT GAGGCGCGGG TGAGTCCGC GCGGGTGAGC ATGCTGACGC CTGTCCCGCG CCGGTAGTCC AGGGAGTTCG 8480  
8481 GCGCGGATT GTGGCGCGGG ATGCGGACCT GACACAGCG CTCCGGGTTC ACCAGGCGCT CTTCGATGGC CCAGCGGAAG 8560  
8561 GGGTGGCTGT GGTGGTACTT GCGCGGTGAC AGGTGACGGA CCGGCGCCCG TGGTGTGGTT GTGGGGTTC AGGTGACGGA CCGGCGCCCG 8640

Figure 3g/3

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Figure 3 Continued

8641 GCGTGGCGG GCGTGCACGG CCGGACAGGCG GCGCAGGAG AGCGATGGGT CCGCGCCGAG CATTGAGAAC GCGTCGTTCG 8720  
8721 GTTCCAGGAG CCGGTTCAGG GCGACCGTCG CGGTGTCCAT CCGCAGGTCC ATCCGAGAAG GCGTCAGGTC GATGTCCGCC 8800  
8801 CGGTGCATCC GACCGCGTGG ATCAGGCTGG ACTCGTGC GG 8880  
8881 GATGGCGGCG GCGGCGAAC GCGCGCCGCG CGGTTCAGTCG GTGCTTCGGT CGTACGCGGG GCGGACGACC ACCAGTCAT 8960  
8961 GCGCGATCGG GTCCGGCCCG TGGCGCAGCC GCGTGAAGTT GATC GTTTCGCGG GCGGACGCGC GGTGGGAGCG 9040  
9041 CTGGGCGTTC CGCGACCG CGGCGCCGCTT CCGGTTCGCG TACCGACGCC CGGCCACGCC GTGGCGGCTC CCGTTCGGGT 9120  
9121 GCGCACCCCG GTTCCCGAAC GGGCTCCCGT TCCCGCGTGG AATCCGTTTC CCGCGCCGCG GCGCGCGTCC GGGCGCGGCG 9200  
9201 TGGCGCTCC TCGGAGACG CTCCTGCGGT TCCTGGGCGC GTTGGCGTTC TGGCGGCGGG TCGCGCGGCC CAGCGCGCGT 9280  
9281 GCGCGTTCG CCGCGCCGCG GGTGGCGTTC GCGCGCGCGG TCGCGTTCG GCGACGCGTG CCGTTCGGC CCGTTCAG 9360  
9361 ACCACCGCG CTCGAGCGGT GAGCGTGGCG ACCGCGTCCA CCGAGCGCGG CAGCGTTCG CCGAGTCCA CCGTTCGCG 9440  
9441 CGGACCGTG TCGATGACCA CCGGTCGTA CAGGCGCGGT GCATGGCGCG CTTTGACGCG CGTCACTCG TCGCGCGGGA 9520  
9521 TCGCTTCGCG GAGGAGCAT CCGGTCCAG CCGTGTGGT GCGCGACCC TCGTGGATGC CCACTTGGG GCGGCGCACG 9600  
9601 GTCTCGGCGG GCGCAGCGCG GAGAGGCGCC TCGCGCACCA CCGACTTGTG GGTGCGCGCG CCGCGTTGA GCGCGGTTTC 9680  
9681 GAGGAGAAC AGCGGTCGA GACCGCGCG GTCCGATGAC GGTGGGTTC TCGACTTCC GCGATGCC CCGAGCACGG 9760

Figure 3h/3



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Figure 3 Continued

9161 GSEGNATCTC GTTGAAGGCGG TCGAAGCCCG CANGTGCGCC CSEGNATCTCG TCTCAGAGGG ACCAGAGCGA GGCCTGTGCGC 9840  
9841 CGSTGTGATAC CCGCAGCGCG GATGTGCGCG CCGTACCCCG TCGAGATCGG GAGCGGCCCG GTGTCCAGCC GCGGTAGAG 9920  
9921 GGCAGCAGGC GGCAGCAGGT ACTCCAGGC GGTGGGGGTGG GTGATCTCG GCGCGGCCG CCGCCAGGGC AGTTCCCTGA 10000  
10001 CGAGTTTGCG CGAGTGGAGG CGGATCTCGC TGTGGCGGGT GCGCAGGTGG ACGGCAGCCG AGCGGGCCCG GTCGACTCG 10080  
10091 TCGCACAGCT CGTGGCCCAT CGACACGCGC GTGTCCCGG GTGCCAGGGC CCGCGTGTGG GCGGCCACTC CCGCCGAGTC 10160  
10161 GATCGCGCGG GACAGGACGA CGGTGGGGGG GCGCTCCCGG CGCGCCAGCC GGGTGGGAC CCGCGTGGCG AGGCGTTCCG 10240  
10241 CGACACAGTC CACCGCGCTC CGTTCCGCGG GCAGCGCGCG GAGAGACCGG GGTGTCCAGG TCGGAGCCCG CTTGGCGGTG 10320  
10321 ATGTGCGAGC CGCGACTCC GTGCAGCAGG AGGGCGGTCC CCGCGGGGAC CCGGCAGAC CCGCGCGCCC CCGGGCGGGT 10400  
10401 GTGGGTGGCG GACAGGCGCA CGCGCGCGCC CGGCTGTGGC GCGAGGGTCT TCGCTTCGGT GCGGGCGGCTC AGCCCGTCA 10480  
10491 CFTCGCGCGG CAGCCACAGG GGTACCGAC CCGCGTGGTC GGTGGCGCGG ACGGTGGCG GGTGGAGGC GTCGGTGAGC 10560  
10561 AGTGGCGGCA ACGTCCGTT CAGGAGCGCG AGGGCCCGG GCGCCGAGCG CCGCCAGCG GCGCAGCA GTTCGCGTC 10640  
10641 GCGAGGGCG GCAGAGGAG CCGCGAGCGC TCGGTCCG CCGCGCGGT TGTACAGTC GCGCGCCAG AGCAGCCGGA 10720  
10721 CCGTGGCGTC GGCAGACAG ACGGCGCGAC GCGCCAGGGT CACCGCGTCT CCGCTCCAGA GCGGGTACG GGTGGCGTCG 10800  
10801 TCGACGGGGA CTTGGGTCC GCGACGCGC MACCGGGTG CGGTGCGCG TTTCGAGTGA CCGCGGGCG CCGCCCGCGG 10880  
10891 GCGGCTCG GTGGCGATGG GCACCGGGA TCGGTACAG AGGTGGGGC CCGGATGGT GAACTGTC TCGAGGGTG 10960  
10961 TCGATGGCC AGGGCGCGCA AACCGCGGA CTGGAACTG TACGCCGCG GTACCTCGAT CAGGAGCGG CCGCCGAGTC 11040

Figure 3i/3

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Figure 3 Continued

11041 CGGCGGCGCTT GGTGAGGGGCG GCGAGCAACG AGGTGCGGTG GGTGGGCGGG ACGGCTGTGG AGCGGTTGGC CTCGGGCGAGC 11120  
11121 TGAGCAAGT CAGCGCTTCC GAAAGCGAGC GCGGGGGGCGT GGGAGGCGTG GTGTCCGAGG TTCTGGTACA GCTCGATCAG 11200  
11201 GCGCTTGGCG TGGTGTGTTA CAGCAGACAT GACGATCGGC AGGCGCAGGC GAGCGCGGT CTCGATGTCG GCGCTGTGG 11280  
11281 AGTGGAGGCC GCGGTGCGCT GCGATGAGGA AAGCGGGCTC CGGGGGCGGG GCGATCTGG GGGCATATGG GGGGGGAGT 11360  
11361 CGTAAAGCGA AGCTGAGCA GCGCGCGGAG GTGAGGATC CCTACGGCTG GTCGACTTG GCGAGAGCA GCGCTTAGTG 11440  
11441 GCGGAGAGAG CCGATGTGCG TGAGCAAGGT GCGGTGTGCG AGGACCGAGT TCATGCAATC GATCAGCTGG TGGACCGCA 11520  
11521 TGCGGTCTC GTACTCGGTG GGGTCGGGCA GGAATTCGGC GACCGGGCG GCGAGGGGCG TGAAGTCGTG CCGGGCTTG 11600  
11601 GGGGCGAGGC CCGAGGTGCG GTCTCGAGC GCGGTGAGGA ATTGGGCGAC GTTGGTGAAC ATGTGATGT CGGCGCGGAA 11680  
11681 CAGCTCGGG ATCGGTTGA CTTGCGGGG GACCGGGAGC GTGGTCTTGG CCGGGCGCG GGTTCACATG GAGGGGCGCA 11760  
11761 GTCTCTGGC GTAGTGTGAG CGATCGCCA GAGGAGGTG GCGGGGGCGG AAGTCTGTT CAGGGGCGGG GTGGCGGAGA 11840  
11841 ATGCGGTCCA TGTAGCGGCT GATGGGCGCG TAGTTGAGCG GGTGGTGTGG CCGCAGAGAC CCTTGGGCGG TGTAGTGGT 11920  
11921 GACAGGGGG ATGTTCAGCC GTCTGGCGAG GCGGCGAGG GCGTCCAGGG CCGCGCGCG GATGACGGCG CTACCGAGGA 12000  
12001 CAGAGAGGG GTTCTCGGCG TCGCGACCA CTCAGCGGGC CTCCTCAGGG CGGGCGCGCC AGTGGCGCTC CAGGGGCTGG 12080  
12081 GTGGCGTGG CCGGAGCAG GGGGGGCTCG GTGGGGGTG CCTTCAGCTC GGGCGCGAG AGGTCCAGCG CAGGGCTGAT 12160  
12161 GAAAGCTGGGA CCGAGGGGCT CGATCGGGCT GTTAGGAGC GGGCTTCGGA GATGCTCG CCGGGTTCGA 12240

Figure 3j/3

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Figure 3 Continued

12241 GCTGGAGCGT GAACTTGGTC ACGGGGCCA TCACGGCGGT GCTGTCCAGG CACTGGTGGG TGACGTTGGG  
GTAGCAGTCG 12320

12321 TAGACTCGG ACTGCGCGC CAGCGGATG ACGGAGTCG GTTCCAGGCG GGAGGTGGCG ACGCGGTTGG  
CCAGGTTGGT 12400

12401 CATGCCGGG CCCAGGTCG CGAAGCACGC CTGGGGGCGG TTGGTGATCC GGGCGAGGAC GTCCGCCATC  
ACCCCGGCGG 12480

12481 TGAACCTGTC CGGGTCAGG ACGAAGTCGA GTCTTTCGAC CTCGTCAAG AGAATGGCGG ACGCCTCCCG  
GCCGACGACG 12560

12561 CCGAATACAT GGTGCACACC GTACTGGTGA AGACGTTCCA GCATGGCTTT CCGGCTCTG GTGGCCATGG  
start of *orf2par* ←

AGATCTCCTT 12640

12641 CGCATCGGAC GGGCGCGGG ATGGCGCCCC GGAACGCGG GCACCGGGCG GTGCACCGC GGTGGCGCAC  
ACCGTGGGTG 12720

12721 GTGCGTTGC CACTGTGCGG ATCGCCTCTT GCGGCGGTC GGACGCGCG CTTGACAGA ATGGSCAAG  
CGGTTCAAG 12800

12801 GCATGGCGTC CATCGTCCTC GTGGCGCTTT TCGTAAATC CGTCCGGCGC CGACGGTCTC CATCCGATTC  
CGTCCCTTC 12880

12881 CGTCCACGA TCCGAGGAGA ATCCATGGAT GTCTTGGCGG CGTTGGAGCG CAAGCCACG CTGAATCTTT  
TCCCCATCGA 12960

12961 GAACCGGCTG TCGCCGCGCG CCAGTGCCGC GCTGGCCACC GACGCCGCA ACCGCTATCC GTACTCCAG  
ACCCCGGTGG 13040

13041 CCGTCTACGG CGATGTACAG GGGCTGGCGG AGGTGTACGC GTACTCGAG GACCTGGCCA AGCGCTTCTT  
CGGGCGCGSC 13120

13121 CACGCGGTG TGCAGTTCCT GTCCGTTCTG CACACCATGC ACACCGTGT GACCGCCTG ACCCGGCCG  
GGGGGCGGT 13200

13201 CCTGGTCCTC GCGCCGAGG ACGGCGGCCA CTACGCCAGG GTGACGATCT GCCGGGCTT CGGCTACGAG  
GTGAGTTCT 13280

13281 TACCTTCGAC CGCCGACAC CTGGAGATCG ACT

13313 (SEQ ID NO:16)

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Figure 3k/3